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REMARKS

In the foregoing amendments, claims 27-29, 31, 35, 38, 39, 41, 43, and 46 have been amended. Claims 27-52 remain pending in the present application. Entry of the claim amendments and reconsideration of the pending claims, as amended, are respectfully requested.

I. Telephone Interview

Applicant wishes to thank Examiner Trimmings for discussing the present application and outstanding Office Action with Applicant's representative during a telephone conversation on February 23, 2006. It is believed that certain issues were identified during the telephone conversation and that these issues have been resolved herein. During the conversation, the Examiner seemed to indicate that it would be beneficial for Applicant to make certain amendments regarding the claim language "any of at least three..." to better place this application in condition for allowance. Thus, Applicant respectfully requests that Examiner carefully consider this response and amendment.

II. Response to Claim Objections

The Examiner objected to claims 29, 39, and 41 for depending on claims containing the transitional phrase "consisting of" that excludes any further limitation. The objection is noted with appreciation, and the claims have been amended accordingly. Applicant believes that the amendments overcome this objection and respectfully requests that the Examiner withdraw the objection.

III. Response to Claim Rejection under 35 U.S.C. §102

During the telephone conversation, the Examiner indicated that the Final Office Action mailed January 18, 2006 maintains the rejections outlined in the previous Office Action. In this regard, claims 27, 32, 35, 36, 43, 45, and 49-52 stand rejected under 35 U.S.C. §102(a) as allegedly being anticipated by Applicant's Admitted Prior Art ("AAPA"). Applicant respectfully traverses this rejection because the AAPA fails to disclose each and every element of independent claims 27, 35, and 43, as amended.

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A. Claims 27-34

Independent claim 27, as amended herein, is reproduced below:

27. A method comprising:

starting a boundary scan test;

transitioning a Test Access Port (TAP) controller when ground bounce occurs during the boundary scan test, *the TAP controller capable of being transitioned from a first undetermined controller state induced by ground bounce, a second undetermined controller state induced by ground bounce, and a third undetermined controller state induced by ground bounce to a determined controller state*, whereby transitioning the TAP controller to a determined controller state recovers the TAP controller from the ground bounce during the boundary scan test; and

resuming the boundary scan test when the TAP controller has been recovered from the ground bounce.

(Emphasis added)

During the telephone conversation, Applicant's representative and Examiner seemed to agree that the AAPA, as discussed on p. 10 of the present application, appears to transition from only one undetermined state (UPDATE) to a determined state. However, the AAPA fails to disclose the above-highlighted feature of claim 27, where the TAP controller is *capable of being transitioned from a first undetermined controller state induced by ground bounce, a second undetermined controller state induced by ground bounce, and a third undetermined controller state induced by ground bounce to a determined controller state*. Therefore, it is believed that claim 27 is allowable over the AAPA. In addition, claims 28-34 are also believed to be allowable for at least the reason that they depend, directly or indirectly, from independent claim 27. Applicant respectfully requests that the Examiner allow entry of the claim amendment and kindly withdraw the rejection.

B. Claims 35-42

Independent claim 35, as amended herein, is reproduced below:

35. An apparatus for conducting a boundary scan test, the apparatus comprising:

at least one Test Access Port (TAP) controller; and

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means for transitioning the TAP controller when ground bounce occurs during a boundary scan test, ***the transitioning means configured to transition the TAP controller from first, second, and third undetermined controller states induced by ground bounce to a determined controller state*** to recover the TAP controller from the ground bounce, thereby allowing the boundary scan test to resume when the TAP controller is recovered from the ground bounce.

(Emphasis added)

The AAPA appears to disclose transitioning the TAP controller from one undetermined state to a determined state. However, the AAPA fails to disclose the above-highlighted feature of claim 35, where *the transitioning means [is] configured to transition the TAP controller from first, second, and third undetermined controller states induced by ground bounce to a determined controller state*. Therefore, it is believed that claim 35 is allowable over the AAPA. Also, claims 36-42, which depend directly or indirectly from independent claim 35, are believed to be likewise allowable. Applicant respectfully requests that the Examiner allow entry of the claim amendment and kindly withdraw the rejection.

C. Claims 43-52

Independent claim 43, as amended herein, is reproduced below:

43. A testing circuit comprising:

first logic configured to provide a Test Access Port (TAP) controller with a low Test Mode Select input prior to a transition from an update state; and
second logic configured to transition the TAP controller when a ground bounce occurs during a boundary scan test, ***the second logic configured to transition the TAP controller from a first undetermined controller state induced by ground bounce, a second undetermined controller state induced by ground bounce, and a third undetermined controller state induced by ground bounce to a determined controller state*** to thereby recover the TAP controller from the ground bounce during the boundary scan test;

wherein the boundary scan test can be resumed when the TAP controller has been recovered from the ground bounce.

(Emphasis added)

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The AAPA appears to disclose that the TAP controller is transitioned from one undetermined state to a determined state. However, the AAPA fails to disclose the above-highlighted feature of claim 43, where *the second logic [is] configured to transition the TAP controller from a first undetermined controller state induced by ground bounce, a second undetermined controller state induced by ground bounce, and a third undetermined controller state induced by ground bounce to a determined controller state*. Since the AAPA does not disclose every element of claim 43, Applicant asserts that claim 43 is allowable over the AAPA. In addition, it is believed that claims 44-52, which depend directly or indirectly from independent claim 43, are also allowable. Applicant therefore respectfully requests that the Examiner allow entry of the claim amendment and kindly withdraw the rejection.

IV. Response to Claim Rejection under 35 U.S.C. §103

During the telephone conversation, the Examiner indicated that the Final Office Action mailed January 18, 2006 maintains the rejections outlined in the previous Office Action. In this regard, claims 28-31, 33, 34, 37-42, 44, and 46-48 stand rejected under 35 U.S.C. §103 as allegedly being unpatentable over the AAPA in view of *Beausang et al.* (U.S. Patent No. 6,012,155). Applicant traverses this rejection because the AAPA and *Beausang et al.*, taken alone or in combination, fail to teach or suggest each and every feature of the claims.

Particularly, *Beausang et al.* fails to overcome the deficiencies of the AAPA as mentioned above with respect to the presently-amended independent claims 27, 35, and 43. With respect to independent claim 27, *Beausang et al.* fails to teach or suggest a *TAP controller capable of being transitioned from a first undetermined controller state induced by ground bounce, a second undetermined controller state induced by ground bounce, and a third undetermined controller state induced by ground bounce to a determined controller state*.

It should be noted that *Beausang et al.* extracts a TAP controller from a netlist and performs a check to see if the TAP controller complies with the IEEE 1149.1 Standard (see Abstract and col. 9, line 23 et seq.). In col. 11, lines 1-55, *Beausang et al.* seems to check initialization of the TAP controller to find and encode the test-logic-reset state 552. The first method for finding the test-logic-reset state is by using

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reset (TRST) or a power up sequence. In this way, the test-logic-reset state can be found. *Beausang et al.* also puts the TAP controller into a random state and applies a synchronizing sequence "11111" to reset the state to the test-logic-reset state 552. In this way, the test-logic-reset state can also be found. These results can then be compared to determine if the two states are the same.

However, *Beausang et al.* fails to teach or suggest a TAP controller capable of being transitioned from *a first undetermined controller state induced by ground bounce, a second undetermined controller state induced by ground bounce, and a third undetermined controller state induced by ground bounce to a determined controller state.* *Beausang et al.* does not discuss the TAP controller being in an undetermined controller state *induced by ground bounce*, but instead puts the TAP controller in a random state and applies the synchronizing sequence in order to find a particular state during simulation.

Since the combination fails to teach or suggest each feature of independent claim 27, Applicant contends that this claim is allowable over the AAPA and *Beausang et al.* Applicant therefore respectfully requests that the Examiner kindly allow entry of the claim amendment and withdraw the rejection.

With respect to independent claim 35, *Beausang et al.* fails to teach or suggest *transitioning means configured to transition the TAP controller from first, second, and third undetermined controller states induced by ground bounce to a determined controller state.* Again, the random controller states of *Beausang et al.* are not *induced by ground bounce* as claimed. Also, with respect to independent claim 43, *Beausang et al.* fails to teach or suggest *second logic configured to transition the TAP controller from a first undetermined controller state induced by ground bounce, a second undetermined controller state induced by ground bounce, and a third undetermined controller state induced by ground bounce to a determined controller state.*


Since *Beausang et al.* fails to overcome the deficiencies of the AAPA, Applicant believes that the independent claims 27, 35, and 43 are allowable. It is also believed that the dependent claims are allowable over the AAPA and *Beausang et al.* for at least the reason that they depend from allowable independent claims.

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CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objection and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims 27-52 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned at (770) 933-9500.

Respectfully submitted,


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